

$$1-p_1-p_2+p_1p_2$$

$$0 \left\{ \begin{array}{ccccc} - & + & r & + \\ + & - & \cancel{\cap} & - \end{array} \right.$$

$$1 \left\{ \begin{array}{ccccc} - & - & \cancel{\cap} & - \\ + & + & r & + \end{array} \right.$$

$$p_1, q_2, q_3$$

$$72 \quad 0.1017$$

$$p_1 - h_1 p_2 - p_1 p_3 + p_1 h_2 p_3$$

$$2 \left\{ \begin{array}{ccccc} - & + & \cancel{\cap} & - \\ + & - & r & + \end{array} \right.$$

$$q_1, p_2, q_3$$

$$130 \quad 0.1638$$

$$p_2 - h_1 p_3 - h_1 p_3 + \dots$$

$$\dots$$

$$3 \left\{ \begin{array}{ccccc} - & + & \cancel{\cap} & - \\ + & - & \cancel{\cap} & + \end{array} \right.$$

$$q_1, q_2, p_3$$

$$71 \quad 0.1003$$

$$87.89$$

(30)

(71)

$$p_1 + h_1 + p_3 - 2p_1p_2 - 2p_1p_3 - 2p_2p_3 + 4p_1p_2$$

$$12 \left\{ \begin{array}{ccccc} - & - & r & + \\ + & + & \cancel{\cap} & - \end{array} \right.$$

$$p_1, (1-h_1) + h_1 p_2$$

$$13 \left\{ \begin{array}{ccccc} - & + & \cancel{\cap} & + \\ + & + & r & - \end{array} \right.$$

$$\frac{p_2 p_1}{q_1 q_2} = \frac{5}{72} = 0.06944$$

$$23 \left\{ \begin{array}{ccccc} - & + & \cancel{\cap} & + \\ + & + & r & - \end{array} \right.$$

$$\frac{p_1 p_2}{q_1 q_2} = \frac{5}{130} = 0.03846$$

$$\frac{p_1 p_2}{q_1 q_2} = \frac{5}{71} = 0.07042$$

$$123 \left\{ \begin{array}{ccccc} - & - & \cancel{\cap} & - \\ + & + & \cancel{\cap} & + \end{array} \right.$$

$$p_1, h_1 p_3$$

$$5 \quad 0.0071$$

(5)

$$A = \frac{1}{q_1}, \quad B = \frac{1}{q_2}, \quad C = \frac{1}{q_3}$$

$$\frac{p}{p_1} = x$$

$$x - x^2 p = 1$$

$$x = A(1+x)$$

$$p = \frac{x}{1+x}$$

$$AB = x = 0.07042, \quad A = \frac{x}{B}$$

$$0.1975$$

$$0.1619$$

$$0.1835$$

$$278 \quad 0.3924$$

$$707.6$$

$$A = \frac{1}{q_1}$$

$$B = \frac{1}{q_2}$$

$$C = \frac{1}{q_3}$$

$$AC = y = 0.03846$$

$$\frac{q_3}{q_1} = y$$

$$\frac{C}{B} = y$$

$$\frac{C}{B} = \frac{y}{z}$$

TABLE 38) 71. L. ~~and~~ ³⁸ ~~38~~ children
The I.Q. and I.B. scores of 65 British children (Roberts and Griffiths)) 91st
etc.

25g

I.Q. (x)	I.B. (y)	I.Q. (x)	I.B. (y)	I.Q. (x)	I.B. (y)
67	36	91	91	108	91
70	28	91	129	108	111
72	34	92	92	108	115
74	28	92	98	109	134
75	48	94	115	110	113
76	50	95	80	110	124
77	62	96	96	110	129
78	22	96	108	110	140
81	82	96	146	112	145
82	84	97	118	113	147
83	64	97	121	114	126
83	77	99	106	114	132
83	82	100	79	115	142
84	92	101	103	115	157
85	91	101	113	116	126
86	65	101	118	116	138
86	75	101	119	123	149
86	76	101	141	126	142
87	68	103	115	126	164
89	80	103	131	127	172
89	110	103	139	135	156
91	72	107	102	Total	6366 - 6739 -
4	4	227	4	4	4

9/11.10

TABLE NO. 2

The Combination of Correlation Coefficients (Roberts and Griffiths), 9/11.10

Group of children	<u>r</u>	<u>Z</u>	<u>n</u> (= $n-3$)	<u>$I_2 Z$</u>
1	0.8859	1.4026	65	62
2	0.9257	1.6274	60	57
3	0.8749	1.3337	67	64
Total	9.9		183	266.3598

7.5

$$\bar{Z} = \frac{S(I_2 Z)}{S(I_2)} = 1.4555$$

$$\bar{Z}^3 = 0.8968$$

$$\frac{1}{\sqrt{27}} = \frac{1}{183} = \underline{\underline{50}}$$

$$\begin{array}{c} A \ B \ C \\ \cancel{A \ B} \quad \cancel{B_1 \ B} \quad \text{Loc} \\ + \quad - \quad + \\ - \quad + \quad - \end{array}$$

$$0 \left\{ \begin{array}{c} ++ \\ -+ \\ - - \end{array} \right. \quad (1-p_1)(1-p_2) -$$

$$1 \left\{ \begin{array}{c} ++- \\ -++ \end{array} \right. \quad p_1(1-p_2) \quad r = \frac{p_2}{1-p_2}$$

$$2 \left\{ \begin{array}{c} +- \\ -++ \end{array} \right. \quad p_2(1-p_1)$$

$$1 \cdot 2 \left\{ \begin{array}{c} ++ \\ -x \end{array} \right. \quad p_1 p_2$$

30

3

10

1

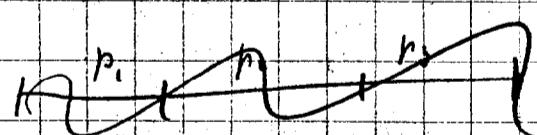
$$p_1 = \frac{1}{11} \quad p_2 = \frac{1}{4}$$

= 9%

= 25%, needing adjustment.

150 59
51 18
201 77

31



273

12

$$\text{Hence } \frac{1}{2} \frac{\partial T}{\partial \lambda_1} = \frac{T}{D} \frac{\partial D}{\partial \lambda_1}$$

$$\text{and } \frac{1}{2} \frac{\partial T}{\partial \lambda_2} = \frac{T}{D} \frac{\partial D}{\partial \lambda_2}$$

$\frac{T}{D}$ Since E/D is a constant occurring in both equations it may be removed to give two new equations whose solutions will themselves be proportional to the solutions of the two equations obtained by the maximisation process.

$$\text{Now } T = \lambda_1^2 S(x_1 - \bar{x}_1)^2 + 2\lambda_1 \lambda_2 S[x_1 - \bar{x}_1](x_2 - \bar{x}_2) + \lambda_2^2 S(x_2 - \bar{x}_2)^2$$

$$\text{and } D = \lambda_1 d_1 + \lambda_2 d_2$$

$$\text{So } \frac{\partial T}{\partial \lambda_1} = 2\lambda_1 S(x_1 - \bar{x}_1)^2 + 2\lambda_2 S[x_1 - \bar{x}_1](x_2 - \bar{x}_2), \quad \frac{\partial T}{\partial \lambda_2} = 2\lambda_1 S[x_1 - \bar{x}_1](x_2 - \bar{x}_2) + 2\lambda_2 S(x_2 - \bar{x}_2)^2$$

$$\frac{\partial D}{\partial \lambda_1} = d_1$$

$$\frac{\partial D}{\partial \lambda_2} = d_2$$

Thus the equations of estimation become

$$\frac{\lambda_1 S(x_1 - \bar{x}_1)^2 + \lambda_2 S[x_1 - \bar{x}_1](x_2 - \bar{x}_2)}{\lambda_1 S[(x_1 - \bar{x}_1)(x_2 - \bar{x}_2)] + \lambda_2 S(x_2 - \bar{x}_2)^2} = d_1$$

$$= d_1$$

$$= d_2$$

which are of the familiar multiple regression type and may be solved in the same way as multiple regression equations.

Putting 1 and 0, and 0 and 1 respectively for d_1 and d_2 gives two pairs of equations whose solutions are

$$\frac{c_{11}}{c_{21}}$$

$$\frac{c_{12}}{c_{22}}$$

$$\frac{c_{11}}{c_{21}}$$

$$\frac{c_{12}}{c_{22}}$$

from which $\lambda_1 = c_{11}d_1 + c_{12}d_2$ and $\lambda_2 = c_{21}d_1 + c_{22}d_2$

Sæderbergs

$$1. \quad \begin{array}{r|rr|r} 107 & 30 & 137 & \\ \hline 76 & 6 & 82 & \\ \hline 183 & 36 & 219 & \end{array} \quad \begin{array}{r|rr|r} 9_1 & 9_2 & 9_1 + 9_2 & \\ \hline 9_3 & 9_4 & 9_3 + 9_4 & \\ \hline 9_1 + 9_3 & 9_2 + 9_4 & n & \end{array}$$

$$X_{(1)}^2 = \frac{(9_1 9_4 - 9_2 9_3)^2 n}{(9_1 + 9_2)(9_3 + 9_4)(9_1 + 9_3)(9_2 + 9_4)}$$

$$= \frac{(6462 - 21280)^2 \times 219}{137 \times 82 \times 183 \times 36} = \frac{587158611236}{740091592}$$

$$= 7.9393$$

$$2. \quad \begin{array}{r|rr|r} 133 & 53 & 186 & \\ \hline 80 & 23 & 103 & \\ \hline 213 & 76 & 289 & \end{array}$$

$$X_{(1)}^2 = \frac{(3109 - 4240)^2 \times 289}{186 \times 103 \times 213 \times 76} = \frac{40310851929}{3101291704}$$

$$= 1.2997$$

$$3. \quad \begin{array}{r|rr|r} 19 & 5 & 34 & \\ \hline 49 & 8 & 57 & \\ \hline 68 & 13 & 81 & \end{array}$$

$$X_{(1)}^2 = \frac{(152 - 245)^2 \times 81}{24 \times 57 \times 68 \times 13} = \frac{7001529}{12091312}$$

$$= 0.5793$$

Seddeberg

	+3	-3	n	χ^2	$\frac{-8,2}{n}$
4.	-1	100	30	180	0.2117
	-5	52	21	71	0.8611
	+1	55	17	72	0.0564
	+8	4	1	5	0.0623
Tot.		209	69	278	1.1915
					17.1259

$$\text{For } -1 \quad \chi^2_{[1]} = \frac{(100 \times 69) - (30 \times 209)^2}{209 \times 69 \times 180} = \frac{3961.900}{11874.730} = 0.2117$$

$$\text{For } +1 \quad \chi^2_{[1]} = \frac{(52 \times 69) - (31 \times 209)^2}{209 \times 69 \times 71} = \frac{881.721}{11023.891} = 0.8611$$

$$\text{For } +1 \quad \chi^2_{[1]} = \frac{(55 \times 69) - (17 \times 209)^2}{209 \times 69 \times 72} = \frac{581.564}{10381.312} = 0.0564$$

$$\text{For } +3 \quad \chi^2_{[1]} = \frac{(4 \times 69) - (1 \times 209)^2}{209 \times 69 \times 5} = \frac{44.489}{129105} = 0.0623$$

BLS

	0	A
4	202	76
2	213	70
	415	152
		567

$$\chi^2_{[1]} = \frac{(15.352 - 11.188)^2 \times 507}{278 \times 289 \times 45 \times 152} = \frac{3961.274.032}{51067.973.860} = 0.0782$$

	0	A
123	251	49
224	415	152
	666	181
		567

$$f. \quad \chi^2_{[1]} = \frac{(384.152 - 30.335)^2 \times 867}{300 \times 567 \times 666 \times 181} = \frac{276225.288.963}{320.504.874.600} = 13.4224$$

122	396	112	508
324	870	89	359
	1666	201	867

$$\chi^2_{(ij)} = \frac{(35,244 - 37,240)^2 \times 867}{508 \times 359 \times 1666 \times 201} = \frac{21,709,693,872}{84,443,440,152} = 0.8893$$

	O	R	Total	$\chi^2_{(ij)}$	$\chi^2_{(i)}$
1	183	36	219	16.44	5.5947
2	213	70	289	1.5738	19.9862
3	68	13	81	0.3148	2.0864
4	202	79	278	2.6946	20.7770
Total	6166	201	867	12.1779	46.5986

$$\text{For } 1 \quad \chi^2_{(ij)} = \frac{(183 \times 201) - (36 \times 1666)^2}{1666 \times 201 \times 219} = \frac{164,019,249}{29,316,1654} = 5.5947$$

$$2 \quad \chi^2_{(ij)} = \frac{(213 \times 201) - (70 \times 1666)^2}{1666 \times 201 \times 289} = \frac{160,881,809}{38,1687,274} = 1.5738$$

$$3 \quad \chi^2_{(ij)} = \frac{(68 \times 201) - (13 \times 1666)^2}{1666 \times 201 \times 81} = \frac{251,100,100}{10,1843,1416} = 8.3148$$

$$4 \quad \chi^2_{(ij)} = \frac{(202 \times 201) - (79 \times 1666)^2}{1666 \times 201 \times 278} = \frac{100,280,196}{37,1214,748} = 2.6946$$

Pederberg

$$4 \quad S\left(\frac{B_1^2}{n}\right) - \frac{107 \cdot B_1^2}{107 \cdot n} = 0.2224$$

$$\frac{107 \cdot n^2}{107 \cdot B_1 \times 107 \cdot B_1} = \frac{278^2}{209 \times 69} = \frac{771284}{141451}$$
$$= 5.3591$$

$$X^2 [3] = 0.2224 \times 5.3591$$
$$= 1.1919$$

○ Brs

$$S\left(\frac{R^2}{n}\right) - \frac{107 \cdot R^2}{107 \cdot n} = 2.11688$$

$$\frac{107 \cdot n^2}{107 \cdot 0 \times 107 \cdot R} = \frac{867^2}{1000 \times 201} = \frac{7511689}{1831860}$$
$$= 5.6152$$

$$X^2 [3] = 2.11688 \times 5.6152$$
$$= 12.1782$$

February

.272 million

272
155
64

1.	41	5	5	
c	107	30	137	
r	76	66	82	
	<u>25</u>	<u>106</u>	<u>219</u>	
	183	36		

$$\frac{a_1 a_2}{a_1 + a_2} \frac{(a_1 a_4 - a_2 a_3)}{(a_1 + a_2)(a_3 + a_4)(a_2 + a_3)(a_1 + a_4)}$$

2.	133	53	186	
c	80	23	103	
r	22	80		
	<u>103</u>	<u>289</u>		
	213	76		

3.	19	5	24	
c	49	8	57	
r	8	29		
	<u>29</u>	<u>81</u>		
	68	13		

	O	R	Total		.272 million
1.	183	36	219	193	183 36 219
2.	213	76	289	251	251 76 289
3.	68	13	81	(113)	(113) 12 81
	464	125	589	251	251 49 300
				213	213 76 289
				464	464 125 589

Grand Total: 1130

Grand Total: 1130

Grand Total: 1130

Kiderberg

4	-r	100	30	130
-s		50	21	71
+r		55	17	72
+1		4		

+ series 100000001 - 100000005 w/ front heel and toe on first row
 + 1 209 169 278

no significant changes noted, possibly minor ones

future findings to stand off 10' before re-visit date
 visitations as planned throughout day except early am at

no message sent to environmental agency to request a re-

4	R	202	76	278
2	R	213	76	289
2	R	415	152	567

no significant changes noted throughout day

	O	R	Total	O	R	Total
1	183	36	219	173	25	49
2	213	76	289	294	415	152
3	68	13	81	192	396	112
4	202	76	278	394	270	89
	666	201	867	394	270	89

total significant count 666 201 867

significant counts for significant species include
 boulders no add due to support village site don not
 stay one night and one point to ground for significant
 environmental impact no significant impacts found to
 significant counts noted in table above

BTS